

P30032WO

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Claims:

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1. Filter element for a chromatographic column (1), comprising
 - a support cage (3) whose contour defines a cylinder open on one side, and
 - a filter (10) which abuts the inside of the support cage (3) and defines a hollow space which is open on one side.

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2. Filter element according to claim 1, characterised in that

15 the support cage (3) has at its open end a substantially annular collar (4).

3. Filter element according to claim 2, characterised in that

20 the support cage (3) preferably has, in the region adjacent to the collar (4), a sleeve-like portion (6) having a closed outer surface, the outside diameter of which extends over the outer contour of the support cage (3).

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4. Filter element according to any one of the preceding claims, characterised in that

30 the support cage (3) has been manufactured from a plastics material.

5. Filter element according to any one of the preceding
claims,
characterised in that
5 the outer contour of the support cage is formed by
longitudinal struts (7) as well as at least one
10 annular strut (8).
6. Filter element according to any one of the preceding
10 claims,
characterised in that
the end edges of the support cage (3) are defined by
at least one transverse strut (9).
- 15 7. Filter element according to any one of the preceding
claims,
characterised in that
the filter (2) is fixedly joined, in particular
20 adhesively bonded, to the inside of the support cage
(3).
- 25 8. Filter element according to any one of the preceding
claims,
characterised in that
the filter (10) has been manufactured from a paper
material.
- 30 9. Filter element according to claim 8,
characterised in that
the paper material lines the inner contour of the
support cage (3) in a single layer.

10. Chromatographic separating column,
characterised in that
it has a syringe-shaped column element (2) which is
5 open at one end and is provided at the other end with
a tapered outlet (11) and into which a filter element
(3, 10) according to any one of the preceding claims
has been inserted.
- 10 11. Chromatographic separating column according to
claim 10,
characterised in that
the size of the support cage (3) is such that at least
part of its outer surface abuts the inside of the
15 column element (2).
12. Chromatographic separating column according to
claim 11,
characterised in that
20 at least part of the outer surface of the support cage
(3), in particular the sleeve-like portion (6), abuts
the inside wall of the column element (2) in a
frictionally engaged manner, while the remaining part
of the outer surface is at a distance from the inside
25 wall of the column element (2).
13. Chromatographic separating column according to any one
of claims 10 to 12,
characterised in that
30 the collar (4) of the support cage (3) rests on the
open end (5) of the column element (2), the length of

the filter element being such that a gap (13) is formed between the closed end face of the support cage (3) and the outlet of the column element (2).

5 14. Chromatographic separating column according to
claim 13,
characterised in that
chromatography material (12) is provided in the gap
(13).

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15. Chromatographic separating column according to any one
of claims 8 to 14,
characterised in that
the support cage (3), in the region of its open end,
15 is joined directly or indirectly to the column element
(2) in an air-tight manner by means of a separate
sealing element (15) or a sealing element (15) joined
to the support cage (3).

20 16. Chromatographic separating device,
characterised in that
it has a separating column (2) according to any one of
claims 8 to 15 as well as a device for applying a
partial vacuum (14) to the outlet (11) of the
25 separating column.

17. Chromatographic separating column,
characterised in that
it comprises:

- a syringe-shaped column element (2) which is open at one end and is provided at the other end with a tapered outlet (11), and
- 5 - a filter inserted into the column element (2), the filter being flat and delimiting a hollow space which is open on one side in the direction of the open end of the column element (2).

18. Separating column according to claim 17,
10 characterised in that
the filter is joined at the edges to a collar of a
plastics material.

19. Chromatographic separating column,
15 characterised in that
it comprises:

- a syringe-shaped column element (2) which is open at one end and is provided at the other end with a tapered outlet (11), and
- 20 - a filter, inserted into the column element (2), which has dimensionally stable stiffening elements of struts and/or rings,
the filter being flat and delimiting a hollow space which is open on one side in the direction of the open end of the column element (2).

20. Separating column according to claim 19,
characterised in that
the filter is formed from a paper-like material and
30 the stiffening elements are formed from a plastics material.